Entergy

Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

March 5, 2018

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Licensee Event Report 2018-001-00, Manual Reactor Scram Due To Loss of One Offsite Transmission Line

Pilgrim Nuclear Power Station
Docket No. 50-293
Renewed License No. DPR-35

LETTER NUMBER: 2.18.011

Dear Sir or Madam:

The enclosed Licensee Event Report 2018-001-00, Manual Reactor Scram Due To Loss of One Offsite Transmission Line, is submitted in accordance with Title 10 Code of Federal Regulations 50.73.

If you have any questions or require additional information, please contact me at (508) 830-7127.

There are no regulatory commitments contained in this letter.

Sincerely,

Peter J. Miner
Manager, Regulatory Assurance

PJM/sc

Attachment: Licensee Event Report 2018-001-00, Manual Reactor Scram Due To Loss of One Offsite Transmission Line (3 Pages)

IE22
NRR

cc: Mr. David C. Lew
Acting Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
2100 Renaissance Blvd., Suite 100
King of Prussia, PA 19406-2713

Mr. John Lamb, Senior Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O-8C2A
Washington, DC 20555

USNRC Senior Resident Inspector
Pilgrim Nuclear Power Station

Attachment

Letter Number 2.18.011

Licensee Event Report 2018-001-00

Manual Reactor Scram Due To Loss of One Offsite Transmission Line

(3 Pages)

NRC FORM 366 (04-2017) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Pilgrim Nuclear Power Station	05000-293	1 OF 3

4. TITLE Manual Reactor Scram Due To Loss of One Offsite Transmission Line

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	N/A
01	04	2018	2018	- 001	00	03	05	2018	FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
N	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
81	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Mr. Peter J. Miner--Regulatory Assurance Manager	508-830-7127

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
C	FK			Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO				

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On January 4, 2018 at approximately 1400 EST, with the reactor at approximately 100 percent core thermal power, Air Circuit Breakers 103 and 104 automatically opened due to a fault condition on 345KV Line 342. The sustained loss of one incoming 345KV line due to weather related conditions requires a plant shut down. While assessing plant conditions, the operating crew reduced reactor power to approximately 81 percent core thermal power. Following these actions, it was determined that the loss of 345KV Line 342 was due to weather and a manual scram was initiated at 1409 hours.

This event is reportable per the requirements of Title 10 Code of Federal Regulations 50.73(a)(2)(iv)(A) due to a manual actuation of the Reactor Protection System and automatic isolation signals affecting containment isolation valves in more than one system.

There was no impact to public health and safety.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Pilgrim Nuclear Power Station	05000-293	2018	- 001	- 00

BACKGROUND

The station preferred (offsite) Alternating Current (AC) power source provides AC power to all station auxiliaries required for startup and shutdown and is normally in use when the unit AC power source is unavailable. The preferred power source is that power supply which furnishes electric energy under accident or post-accident conditions. At Pilgrim Nuclear Power Station (PNPS), this is an Offsite Power Source (either of two 345KV lines) supplied to the Startup Transformer.

EVENT DESCRIPTION

On January 4, 2018 at approximately 1400 EST, with the reactor at approximately 100 percent core thermal power, Air Circuit Breakers 103 and 104 automatically opened due to a fault condition on 345KV Line 342. The sustained loss of one the incoming 345KV lines due to weather related conditions defines an anticipated loss of offsite power (per PNPS procedure). Based on meeting established requirements, reactor power was reduced to approximately 81 percent core thermal power. Following these actions, a procedurally required manual scram was initiated at 1409. The manual scram resulted in all control rods being fully inserted. Primary Containment Isolation System Groups II, VI and Reactor Building Isolation System isolations occurred as expected. Emergency Operating Procedure (EOP)-01 was entered when the reactor water level reached less than 12 inches of water due to the expected post scram reactor water level reduction. As a contingency, Emergency Diesel Generators A and B were manually started and placed on Emergency 4160V AC buses A5 and A6 per procedure.

CAUSE OF THE EVENT

The direct cause of the event was a static line supplied by others that failed and wrapped around all three phases of a 345KV transmission line (approximately 25 miles from the plant) causing the fault, during winter storm Grayson.

CORRECTIVE ACTIONS

The Transmission Operator has removed the failed static wire which caused the line trip and has restored power to the 345KV Line 342. The Transmission Operator's Transmission Engineering Department is continuing to investigate the failure and will provide any additional details to the station.

SAFETY CONSEQUENCES

The actual consequences were a loss of one offsite transmission line which resulted in a procedurally required operator-initiated manual scram. There were no other actual consequences to general safety of the public, nuclear safety, industrial safety, or radiological safety for this event.

The risk from the actual event was considered minor as described above and the scram was considered uncomplicated as defined in Nuclear Energy Institute 99-02.

Had the manual scram not been initiated, the plant would have continued operating with only one 345KV line providing offsite power. This additional line remained in service during the storm.

Therefore, based on the above information there was no adverse impact on the public health or safety.

REPORTABILITY

This event is reportable per the requirements of 10 CFR 50.73(a)(2)(iv)(A) due to a manual actuation of the Reactor Protection System and automatic isolation signals affecting containment isolation valves in more than one system.

PREVIOUS EVENTS:

LER 2015-001-00, Loss of 345KV Power Resulting in Automatic Reactor Scram During Winter Storm Juno

LER 2013-009-00, Loss of Offsite Power and Reactor Scram

LER 2013-003-00, Loss of Offsite Power Events Due to Winter Storm Nemo

REFERENCES:

CR-PNP-2018-00093